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Proposed Maximum Residue Limit PMRL2017-29

# Clethodim

*(publié aussi en français)*

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on various commodities to the product labels of Select EC Herbicide and Centurion EC Herbicide, containing technical grade clethodim, is acceptable. The specific uses approved in Canada are detailed on the label of Select EC Herbicide and Centurion Herbicide, Pest Control Products Act Registration Number 22625 and 27598, respectively.

The evaluation of these clethodim applications indicated that the end-use products have value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for clethodim is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to replace or be added to the MRLs already established for clethodim, are as follows.

**Table 1 Proposed Maximum Residue Limit for Clethodim**

| Common Name | Residue Definition | MRL (ppm)[1] | Food Commodity |
|---|---|---|---|
| | | 3.0 | Spices (crop subgroup 19B)[2,3] |
| | | 0.9 | All dried herbs within crop subgroup 19A[4] |
| | | 0.7 | All fresh herbs within crop subgroup 19A[5] |
| | | 0.5 | Hops (dried); garlic |
| | | 0.2 | Cherry subgroup (crop subgroup 12-09A) |

[1] ppm = parts per million
[2] The currently established MRLs of 0.7 ppm in/on fenugreek seeds, 1.5 ppm in/on caraway seeds, and 0.4 ppm in/on mustard seeds (condiment type) are proposed to be revised to 3.0 ppm.
[3] There is currently a MRL of 3 ppm established for dill seeds and coriander seeds, two crops within crop subgroup 19B.
[4] The currently established MRL of 0.8 ppm in/on dried dillweed leaves is proposed to be revised to 0.9 ppm. An MRL of 0.9 ppm is currently established for dried basil leaves, a crop within crop subgroup 19A.
[5] A MRL of 0.7 ppm is currently established for fresh dillweed leaves and fresh basil leaves, two crops within crop subgroup 19A.

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

**International Situation and Trade Implications**

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data.

Table 2 compares the MRLs proposed for clethodim in Canada with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

**Table 2 Comparison of Canadian MRLs, American Tolerance and Codex MRLs**

| Food Commodity | Canadian MRL (ppm) | American Tolerance (ppm) | Codex MRL (ppm) |
|---|---|---|---|
| Garlic | 0.5 | 0.5 (Onion, bulb, subgroup 3-07A) | 0.5 |
| Hops (dried) | 0.5 | 0.5 | Not established |
| Cherry subgroup (crop subgroup 12-09A) | 0.2 | 0.2 (Fruit, stone, group 12-12) | Not established |
| All fresh herbs within crop subgroup 19A | 0.7 | | |
| All dried herbs within crop subgroup 19A | 0.9 | | |
| Spices (crop subgroup 19B) | 3 | Not established | Not established |

**Next Steps**

The PMRA invites the public to submit written comments on the proposed MRLs for clethodim up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

# Appendix I

## Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for clethodim in hops, dry bulb onions, sweet cherries, tart cherries, chives, basil, fenugreek, caraway and dill were submitted to support the domestic use of Select EC Herbicide and Centurion EC Herbicide on hops, garlic, sweet cherries, tart cherries, and herbs and spices (crop group 19).

## Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for clethodim was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for hops (dried), garlic, crop subgroup 19A (herbs subgroup; fresh and dried), crop subgroup 19B (spices subgroup) and crop subgroup 12-09A (cherry subgroup).

**Table A1 Summary of Field Trial Data Used to Support the MRLs**

| Commodity | Application Method/ Total Application Rate (g a.i./ha)[1] | Preharvest Interval (days) | Lowest Average Field Trial Residues (ppm) | Highest Average Field Trial Residues (ppm) |
|---|---|---|---|---|
| Caraway seed | Foliar application/ 87-92 | 52-60 | <0.22 | <0.34 |
| Dill seed | Foliar application/ 92-95 | 36-47 | 0.20 | 1.29 |
| Dried basil leaves | Foliar application/ 90-91 | 30-31 | <0.10 | <0.26 |
| Fenugreek seed | Foliar application/ 86-87 | 29-30 | 0.225 | 0.392 |
| Fresh basil leaves | Foliar application/ 90-91 | 31 | <0.14 | <0.14 |
| Fresh chive leaves | Foliar application/ 87-92 | 30-31 | <0.094 | 0.115 |
| Hops (dried) | Banded ground application/ 556-581 | 20-22 | <0.18 | <0.18 |

| Commodity | Application Method/ Total Application Rate (g a.i./ha)[1] | Preharvest Interval (days) | Lowest Average Field Trial Residues (ppm) | Highest Average Field Trial Residues (ppm) |
|---|---|---|---|---|
| Onions, dry bulb | Foliar post-emergent application/ 560-606 | 44-45 | <0.094 | <0.24 |
| Sweet and tart cherries | Directed application to the ground at the base of the tree/ 556-594 | 13-16 | <0.19 | <0.19 |

[1] g a.i./ha = grams of active ingredient per hectare

Following the review of all available data, the MRLs as proposed in Table 1are recommended to cover residues of clethodim. Residues of clethodim in these crop commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.